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10/587,539

07/28/2006

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EXAMINER

STEADMAN, DAVID J

ART UNIT

PAPER NUMBER

1656

MAIL DATE

DELIVERY MODE

02/13/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                   |  |
|------------------------------|--------------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/587,539 | <b>Applicant(s)</b><br>ABE ET AL. |  |
|                              | <b>Examiner</b><br>David J. Steadman | <b>Art Unit</b><br>1656           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-33 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of the Application***

- [1]** Claims 1-33 are pending in the application.
- [2]** Applicant's preliminary amendment to the claims, filed on 7/28/06, is acknowledged. This listing of the claims replaces all prior versions and listings of the claims.
- [3]** Applicant's preliminary amendments to the specification, filed on 7/28/06 and 8/18/08, are acknowledged.
- [4]** Receipt of a sequence listing in computer readable form (CRF), a paper copy thereof, a statement of their sameness, a statement that no new matter has been added to the specification by the paper copy of the sequence CRF, and an amendment directing entry of the substitute sequence listing paper copy into the specification, all filed on 8/18/08, is acknowledged.

### ***Election/Restriction***

- [5]** Lack of unity is required under 35 U.S.C. 121 and 372. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

**Group I**, claim(s) 1-2 and 5-6, drawn to the special technical feature of a polypeptide of SEQ ID NO:2 or SEQ ID NO:3.

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**Group II**, claim(s) 3-4, 7-8, 11, 13, 15, 17, and 22-24, drawn to the special technical feature of a DNA encoding a polypeptide of SEQ ID NO:2 or SEQ ID NO:3 and a recombinant vector.

**Group III**, claim(s) 9-10 and 21, drawn to the special technical feature of a dimeric polypeptide of SEQ ID NO:2 and SEQ ID NO:6 and a taste-modifying composition.

**Group IV**, claim(s) 12, 14, 16, and 18, drawn to the special technical feature of a recombinant vector encoding the polypeptide of SEQ ID NO:6.

**Group V**, claim(s) 19, 25, 27, 29, and 31-33, drawn to the special technical feature of a transformant carrying a first recombinant vector encoding a polypeptide of SEQ ID NO:2 or SEQ ID NO:3 and a second recombinant vector encoding SEQ ID NO:6.

**Group VI**, claim(s) 20, 26, 28, and 30, drawn to the special technical feature of a process for producing a dimeric protein.

**[6]** Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

**[7]** The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention or species.

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**[8]** Should applicant traverse on the ground that the inventions have unity of invention (37 CFR 1.475(a)), applicant must provide reasons in support thereof.

Applicant may submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case.

Where such evidence or admission is provided by applicant, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

**[9]** Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Reason(s) Supporting Lack of Unity***

**[10]** The technical feature linking groups I-II is a polynucleotide encoding the polypeptide of SEQ ID NO:2 or 3. The technical feature linking groups III-VI is a polynucleotide encoding the polypeptide of SEQ ID NO:6. The inventions listed as groups I-VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

**[11]** According to PCT Rule 13.2 unity of invention exists only when the shared same or corresponding special technical feature is a contribution over the prior art. The

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inventions of groups I-VII do not relate to a single general inventive concept because they lack the same or corresponding special technical feature.

**[12]** The technical feature of Groups I-II includes a polynucleotide encoding SEQ ID NO:2 or 3, which technical feature is shown by, *e.g.*, Shirusuka et al. (*Biosci. Biotechnol. Biochem.* 68:1403-1407, 2004; cited in the IDS filed on 7/28/06), to lack novelty or inventive step because Shirusuka et al. teaches a polynucleotide encoding SEQ ID NO:2 and 3 (see p. 1405, Figure 2). See also Suzuki et al. (*FEBS Lett.* 573:135-138, 2004; cited in the IDS filed on 7/28/06), which also teaches isolation of a DNA encoding SEQ ID NO:2 (paragraph bridging pp. 135-136 and p. 136, Figure 1). Thus, the technical feature is not a contribution over the prior art. Should Applicant present an argument that the reference of Shirusuka et al. and Suzuki et al. cannot be relied upon as prior art due to the dates of the publications, applicant should provide an English-language translation of the priority document submitted with the instant application.

**[13]** The technical feature of Groups III-VI includes a recombinant vector encoding SEQ ID NO:6, which technical feature is shown by, *e.g.*, JP 6-189771 (cited in the IDS filed on 7/28/06), to lack novelty or inventive step because JP 6-189771 teaches a polynucleotide encoding SEQ ID NO:6 (see pp. 9-10) and it would have been obvious to insert the encoding nucleic acid into a vector for recombinant production of the encoded polypeptide. Thus, the technical feature is not a contribution over the prior art.

***Notice of Potential Rejoinder***

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**[14]** The examiner has required restriction between product and process claims.

Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder.

All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. Failure to do so may result in a loss of the right to rejoinder. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Steadman whose telephone number is 571-272-0942. The examiner can normally be reached on Mon to Fri, 7:30 am to 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon P. Weber, can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/David J. Steadman/  
Primary Examiner, Art Unit 1656